



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

May 30, 2007

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the Nuclear Metals Superfund Site

FROM: David E. Cooper, Chair 
National Remedy Review Board

TO: James T. Owens, Director
Office of Site Remediation and Restoration
U.S. EPA Region 1

Purpose

The National Remedy Review Board (the Board) has completed its review of the proposed cleanup action for the Nuclear Metals Superfund Site in Concord, Massachusetts. This memorandum documents the Board's advisory recommendations.

Context for Board Review

The Administrator announced the Board as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The Board furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The Board evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the

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range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the Board makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the Region's final decision. The Board expects the Regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the Board does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action

The Nuclear Metals, Inc. (NMI) Superfund Site encompasses 46.4-acres and includes eight interconnected buildings, several smaller outbuildings, paved parking areas, a cooling water recharge pond, a former waste holding basin, a bog, and areas of fill and/or waste materials. The proposed action the Board reviewed included only the interconnected buildings. Operations at the Site included metallurgy research and development, large-scale production of depleted uranium (DU) shields and armor penetrators, metal powders, beryllium and beryllium alloy parts production, and manufacture of specialty titanium parts. Much of the operations at the site were conducted under contracts with the United States Atomic Energy Commission and the United States Department of Defense. Starmet's (NMI's new name) radioactive materials operations have historically been regulated under a radioactive materials handling license from the Massachusetts Department of Public Health's Radiation Control Program (MADPH-RCP), under authority delegated from the U.S. Nuclear Regulatory Commission (NRC).

The Engineering Evaluation/Cost Analysis (EE/CA) under consideration by the Board was developed while a Remedial Investigation/Feasibility Study (RI/FS) is in progress for the Site. CERCLA requires that any removal action taken be consistent with the long term remedial action for the Site. In this case, given the decommissioning requirements that must be met (MADPH-RCP unrestricted release clean up standard of 10 mrem/yr Total Effective Dose Equivalent (TEDE) under 105 CMR120.245), it is assumed that the buildings will eventually be demolished. This EE/CA evaluates specific hazards associated with Site buildings and their contents and measures to address these hazards. The Region is proposing a non-time critical removal action for demolition and off-site disposal of the contaminated buildings and their contents at an estimated cost of approximately \$77 million. Under the preferred alternative, the following would be done:

- a) Strip off removable radiological contamination from select surfaces to minimize waste volumes to be disposed as low-level radioactive waste using one or more of the methods discussed below.

- b) Cap and/or clean existing drain lines, vaults, and sumps;
- c) Demolish structures and buildings;
- d) Off-site disposal of removed materials, as appropriate; and,
- e) Fill voids and temporarily cap building slabs, pending a future remedial action to address building slabs and impacted sub-slab soil.

NRRB Advisory Recommendations

The Board reviewed the information package describing this proposal and discussed related issues with Melissa Taylor, Bob Cianciarulo, Larry Brill, and Audrey Zucker from EPA Region 1 and Jay Naparstek and Paul Craffey from Massachusetts Department of Environmental Protection on April 10, 2007. Based on this review and discussion, the Board offers the following comments:

1. The materials presented to the Board suggest that some site conditions may pose imminent risks. The Board recommends that the Region consider whether the contemplated timetable for taking response actions at this site is consistent with the urgency posed by the specific circumstances (e.g., fire and electrocution hazard posed by electrical power circuits still in use throughout the buildings with leaking roofs, pyrophoric contaminants, combustible building materials). The Region should explain its conclusions in the decision documents.
2. The package presented to the Board did not include a consideration of on-site disposal. The Board recommends that the Region include a discussion of how options for on-site temporary staging and/or disposal of demolition waste and debris were considered when assembling the alternatives presented in the engineering evaluation/cost analysis (EE/CA). The discussion should reflect technical considerations, applicable or relevant and appropriate requirements (ARARs) and local/State perspectives. The decision documents should also be explicit how the disposal option in the preferred alternative would meet the NCP program management principle to be "not-inconsistent with...the expected final remedy" (§300.430(a)(1)(ii)(B)).
3. The Board notes that this high cost response action is being planned as a non-time-critical removal action (NTCRA) under CERCLA authority. The Region should address how this NTCRA is consistent with the NCP provisions addressing removal actions, and how it will be consistent with the follow-on remedial action as provided in CERCLA Section 104(c). The Board also notes there are several potentially relevant guidance documents, including but not limited to "Use of Non-Time-Critical Removal Authority in Superfund Response Actions" (Feb. 14, 2000) (EPA's policy on consultation with EPA Headquarters on removal actions with costs greater than \$6,000,000) and "Policy on Decommissioning of Department of Energy Facilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)," U.S. Department of Energy and U.S. Environmental Protection Agency, (May 22, 1995). The Board supports the Region's plan to conduct community involvement activities for this action that are substantially equivalent to those used for remedial actions.

4. The Nuclear Metals facility contains many non-radioactive contaminants, both as contents of the buildings and as part of the building structures, which could be released if there were a fire or collapse of a building. However, the objectives for the removal action presented to the Board did not include objectives for these non-radiological risks. The Board recommends that the Region consider the possibility of adding objectives for non-radiological risk, including the risks associated with depleted uranium (DU), asbestos, and beryllium, based on currently available information.

5. The Board notes that the 10 mrem/yr removal goal is based on ARARs for building demolition during decommissioning radioactive sites, irrespective of future land use (Massachusetts Regulations for the Control of Radiation, Radiological Criteria For Unrestricted Use: 105 CMR 120.245). The Board recommends that the decision documents clarify that the use of the 10 mrem standard for building demolition does not presuppose land use assumptions for future actions at the site. The decision documents should also clarify the relationship among future land use assumptions, removal objectives, and ARARs, and their roles in establishing removal goals.

6. The Board notes the elevated beta and alpha disintegrations per minute (dpm) count levels as reported in the package. The count levels (dpm) are higher than for depleted uranium (DU) alone. The Board recommends that the Region refine the waste characterization for this removal action to include both chemical and radiological analysis (e.g., isotopic, gamma spectrometry). This information may be critical with regard to worker safety during the action and selection of appropriate (and least costly) commercial disposal options.

The Board appreciates the Region's efforts in working together with the potentially responsible parties, State, and community groups at this site. We request that a draft response to these findings be included with the draft Proposed Plan when it is forwarded to your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both me and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the Board website (<http://www.epa.gov/superfund/programs/nrrb/>).

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8763 should you have any questions.

cc: J. Woolford (OSRTI)
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